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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99352 • (509) 372-7950

August 8, 2007

Ms. Shirley J. Olinger, Acting Manager  
Office of River Protection  
United States Department of Energy  
P.O. Box 450, MSIN: H6-60  
Richland, Washington 99352

Mr. William S. Elkins, Project Director  
Bechtel National, Inc.  
2435 Stevens Center Place, MSIN: H4-02  
Richland, Washington 99354

Re: Submittal of the Hanford Facility RCRA Permit Modification Notification Form  
24590-PTF-PCN-ENV-06-018; Class 1 Modification to the Hanford Facility Resource  
Conservation and Recovery Act Permit, Dangerous Waste Portion for the Treatment,  
Storage, and Disposal of Dangerous Waste, Part III, Operating Unit 10 (Waste Treatment  
and Immobilization Plant), WA7890008967

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Dear Ms. Olinger and Mr. Elkins:

The Department of Ecology approves the referenced Class 1 Modification. The approved  
Hanford Facility RCRA Permit Modification Notification Form is enclosed.

Modification 24590-PTF-PCN-ENV-06-018 provides the following updated mechanical data  
sheets for the Pretreatment Waste Feed Receipt Vessels (24590-PTF-MV-FRP-VSL-  
00002A/B/C/D):

- 24590-PTF-MVD-FRP-00005, Revision 10
- 24590-PTF-MVD-FRP-00006, Revision 10
- 24590-PTF-MVD-FRP-00007, Revision 10
- 24590-PTF-MVD-FRP-00008, Revision 10

If there are any questions, contact me at 509-372-7882 or Robbie Biyani at 509-372-7884.

Sincerely,

Brenda Becker-Khaleel  
WTP Permit Writer  
Nuclear Waste Program

bcs:jc  
Enclosure

cc: See next page

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AUG 10 2007

EDMC



Ms. Olinger and Mr. Elkins  
August 8, 2007  
Page 2

cc electronic w/enc:

John Eschenberg, USDOE  
Lori Huffman, USDOE  
Tony McKarns, USDOE  
Gae Neath, USDOE  
Don Sommer, USDOE  
William Taylor, USDOE  
Julie Atwood, BNI  
Brad Erlandson, BNI  
Peggy Fisher, BNI  
Stan Hill, BNI  
Dennis Klein, BNI  
Sandi Murdock, BNI  
Phil Peistrup, WGI

cc w/enc:

Administrative Record: Tank Waste Treatment Requirements ✓ H-0-8  
Environmental Portal  
USDOE-ORP Correspondence Control

Quarter Ending June 30, 2007

24590-PTF-PCN-ENV-06-018

**Hanford Facility RCRA Permit Modification Notification Form****Part III, Operating Unit 10****Waste Treatment and Immobilization Plant**

## Index

Page 2 of 3: Hanford Facility RCRA Permit, Operating Unit 10, Waste Treatment and Immobilization Plant  
Update Mechanical Data Sheets for Pretreatment Facility Waste Feed Receipt Vessels (24590-PTF-MV-FRP-VSL-00002A/B/C/D) in Appendix 8.6 of the Dangerous Waste Permit.

Submitted by Co-Operator:

Reviewed by ORP Program Office:

D. A. Klein  
D. A. Klein

6/27/07  
Date

S. J. Clinger  
S. J. Clinger

7/16/07  
Date

Quarter Ending June 30, 2007

24590-PTF-PCN-ENV-06-018

**Hanford Facility RCRA Permit Modification Notification Form**

Unit:

**Waste Treatment and Immobilization Plant**

Permit Part &amp; Chapter:

**Part III, Operating Unit 10**Description of Modification:

The purpose of the modification is to update four PTF mechanical data sheets for Waste Feed Receipt Vessels 24590-PTF-MV-FRP-VSL-00002A/B/C/D, identified as 24590-PTF-MVD-FRP-P0005/6/7/8 in Appendix 8.6 of the Dangerous Waste Permit (DWP). The following source mechanical data sheets are submitted to replace the permit data sheets currently in Appendix 8.6:

- Mechanical Data Sheet: Vessel (24590-PTF-MVD-FRP-00005, Rev 10)
- Mechanical Data Sheet: Vessel (24590-PTF-MVD-FRP-00006, Rev 10)
- Mechanical Data Sheet: Vessel (24590-PTF-MVD-FRP-00007, Rev 10)
- Mechanical Data Sheet: Vessel (24590-PTF-MVD-FRP-00008, Rev 10)

The above mentioned mechanical data sheets include revisions as indicated by revision triangles shown on the documents. The revisions shown are the result of ongoing design. The significant changes are provided as follows:

- The following footnote (indicated by a double asterisk) was added to the actual weight and seismic based moment in the Design Data Section:  
"The actual weights and the seismic base moment shown herein are based on the original seismic data and these figures are subject to change, based on the new loads obtained from the seismic redesign."

- Clarified the third paragraph in the Hydrodynamic Loading Section (which describes the plot)

from: "Overblow loads vary as a function of the distance from the center of the overblowing pulse jet mixer nozzle and the elevation "H" above the overblowing pulse jet mixer nozzle as plotted"

to: "Overblow loads vary as a function of the distance from the center of the overblowing pulse jet mixer nozzle and the elevation "H" above the overblowing pulse jet mixer nozzle up to the overflow level as plotted in the form of overblow pressures"

The plot is not changing this is an informational change only.

- Reworded the paragraph in the Hydrodynamic Loading Section below the plot

from: "The overblow pressure shall only be applied to the projected area of the overblowing pulse jet mixer in the vertical, upward direction and to all surrounding components in the horizontal plane, radiating from the overblowing pulse jet mixer. Seller shall consider that any single pulse jet mixer may overblow 100 cycles."

to: "For all vessel internal components other than the overblowing pulse jet mixer, the overblow forces shall be applied a) in the vertical direction, and b) in the horizontal direction, radiating from the centerline of the overblowing pulse jet mixer. For the overblowing pulse jet mixer, the force shall be applied in the vertical upward direction only. The overblow force on all components, including the structure and supports, shall be calculated by applying the overblow pressure at the location of the nearest surface of the components and to the projected area of the component, facing the appropriate direction. The normal force component, specified for the normal pulse jet mixer operation condition, is not applicable to the overblow condition. Any single pulse jet mixer may overblow 1000 cycles. Reference CCN 125541

Quarter Ending June 30, 2007

24590-PTF-PCN-ENV-06-018

dated 7/27/05."

This revision results in the vessel being functionally equivalent or upgraded due to accounting for vertical forces from PJM overblows on vessel internal components. Additionally, the vessel will now be designed for 1000 cycles from a single pulse jet mixer overblow instead of 100.

There are no outstanding change documents associated with these mechanical data sheets.

Please replace the following in Appendix 8.6 of the dangerous waste permit.

Appendix 8.6												
Replace:	24590-PTF-MVD-FRP-P0005, Rev. 3	With:	24590-PTF-MVD-FRP-00005, Rev. 10									
	24590-PTF-MVD-FRP-P0006, Rev. 3		24590-PTF-MVD-FRP-00006, Rev. 10									
	24590-PTF-MVD-FRP-P0007, Rev. 3		24590-PTF-MVD-FRP-00007, Rev. 10									
	24590-PTF-MVD-FRP-P0008, Rev. 3		24590-PTF-MVD-FRP-00008, Rev. 10									
<p>WAC 173-303-830 Modification Class: <sup>1 2</sup></p> <table border="1"> <thead> <tr> <th>Class 1</th> <th>Class <sup>1</sup> 1</th> <th>Class 2</th> <th>Class 3</th> </tr> </thead> <tbody> <tr> <td>X</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Please mark the Modification Class:</p> <p>Enter Relevant WAC 173-303-830, Appendix I Modification citation number: A.1 and A.3</p> <p>Enter wording of WAC 173-303-830, Appendix I Modification citation:</p> <p>A.1. Administrative and informational changes</p> <p>A.3. Equipment replacement or upgrading with functionally equivalent components (e.g., pipes, valves, pumps, conveyors, controls)</p>					Class 1	Class <sup>1</sup> 1	Class 2	Class 3	X			
Class 1	Class <sup>1</sup> 1	Class 2	Class 3									
X												
<p>Modification Approved: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (state reason for denial)</p> <p>Reason for denial:</p>		<p>Reviewed by Ecology:</p> <p><i>B. Becker-Khaleel</i> 8/8/07</p> <p>B. Becker-Khaleel Date</p>										

<sup>1</sup> Class 1 modifications requiring prior Agency approval.

<sup>2</sup> If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to a Class '1, if applicable.